

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Amended) A mobile platform, comprising:

a volume adapted to contain a first, a second, and a third object;

a primary air conditioning system adapted to compress and cool a quantity of outside air, the air conditioning system further adapted to pressurize the volume therewith so that the quantity of outside air becomes a quantity of inside air, the air conditioning system further adapted to ventilate the first object with the quantity of inside air;

an exhaust adapted to exhaust a portion of the quantity of inside air; and

a cooler adapted to cool the portion of the quantity of inside air and to use the portion of the quantity of inside air to cool the second and third objects.
2. (Previously Amended) The mobile platform according to claim 1, the first object being a passenger.
3. (Previously Amended) The mobile platform according to claim 1, the second object to be selected from the group consisting of a cargo compartment, a component of electronic equipment, and a galley refrigerator.

4. (Cancelled)

5. (Previously Amended) The mobile platform according to claim 1, the cooler comprising a coolant selected from the group consisting of polyalphaolefin, propylene glycol, and water.

6. (Previously Presented) The mobile platform according to claim 1, the primary air conditioning system further comprising an air cycle system and a turbine expander.

7. (Previously Amended) An aircraft, comprising:
an internal volume adapted to contain a plurality of heat generating loads;
a compressor adapted to compress outside air;
a cooler adapted to cool the compressed outside air to turn the cooled compressed outside air into inside air, the inside air adapted to pressurize the volume;
a centralized thermal management system, the thermal management system adapted to provide the inside air to a first one of the plurality of heat generating loads, the thermal management system further adapted to exhaust a portion of the inside air from the first heat generating load, cool the portion of the inside air, and supply the portion of the inside air to at least a second one of the plurality of heat generating loads to control the temperature of the second heat generating load, the

temperature of the second heat generating load being controlled solely by the portion of the inside air.

8. (Previously Amended) The aircraft according to claim 7, the volume further adapted to contain a passenger, the centralized thermal management system adapted to ventilate the passenger with the inside air.

9. (Previously Amended) The aircraft according to claim 7, the plurality of heat generating loads to include one of a piece of cargo, a piece of electronic equipment, and a galley refrigerator.

10. (Cancelled)

11. (Previously Amended) The aircraft according to claim 7, the centralized thermal management system comprising a coolant selected from the group consisting of polyalphaolefin, propylene glycol, and water.

12. (Previously Amended) The aircraft according to claim 7, the cooler further comprising an air cycle system and a turbine expander.

13. (Previously Amended) A method of managing thermal loads on an aircraft comprising:

compressing a quantity of outside air;

cooling the quantity of outside air to form a quantity of inside air;
ventilating a first object in a pressurized volume of the aircraft with the quantity of inside air;
exhausting a portion of the quantity of inside air from the first object;
cooling the portion of the quantity of inside air; and
cooling a second object in the pressurized volume solely with the portion of the quantity of inside air.

14. (Previously Amended) The method according to claim 13, the first object comprising a passenger.

15. (Previously Amended) The method according to claim 13, wherein the second object is selected from the group consisting of a cargo compartment, a piece of electronic equipment, and a galley refrigerator.

16. (Cancelled)

17. (Previously Amended) The method according to claim 13, wherein the portion of the quantity of inside air is cooled with a coolant selected from the group consisting of polyalphaolefin, propylene glycol, and water.

18. (Previously Amended) The method according to claim 13, the cooling of the quantity of outside air to further comprise:

using ram air to cool the quantity of outside air; and
expanding the quantity of outside air.

19. (Previously Amended) A method of designing an aircraft air conditioning system comprising:

including an outside air supply and a supplemental cooling unit in an architecture of the aircraft air conditioning system;

designing the outside air supply to compress outside air to form a quantity of inside air that pressurizes a volume within the aircraft and ventilates a first portion of the pressurized volume;

designing the supplemental cooling unit to exhaust a portion of the inside air away from the first portion of the pressurized volume and control the temperature of an object in a second portion of the pressurized volume of the aircraft, the temperature of the object being controlled solely with the portion of the inside air exhausted away from the first portion of the pressurized volume; and

sizing the outside air supply based upon the including of the supplemental cooling unit in the aircraft air conditioning system architecture and further based upon using the exhausted portion of the inside air to control the temperature of the object in the second portion of the pressurized volume of the aircraft.

20. (Previously Amended) The method according to claim 19, further comprising including an inside air recirculation line to the supplemental cooling unit to enable the supplemental cooling unit to control the temperature of the object in the second portion of the pressurized volume with the recirculation air.

21. (Previously Amended) The method according to claim 19, further comprising including a central coolant loop to the supplemental cooling unit to enable the supplemental cooling unit to control the temperature of the object in the pressurized volume with a coolant of the central coolant loop.

22. (New) A mobile platform comprising:

a cabin area;

a primary air conditioning system adapted to compress and cool a first quantity of air drawn from outside the mobile platform, to create a second quantity of air, and to pressurize said cabin area with said second quantity of air;

a supplemental cooling system for cooling a specific subsystem on said mobile platform other than said cabin area;

an exhaust component adapted to exhaust a portion of said second quantity of air from said cabin area: and

the supplemental cooling system adapted to receive said portion of said second quantity of air exhausted from said cabin and to cool said portion to create a third quantity of air, and to circulate said third quantity of air back into said cabin area to mix with said second quantity of air and to assist in cooling said cabin area.

23. (New) A method for cooling an interior cabin area of a mobile platform, comprising:

using a primary air conditioning system to compress and cool a first quantity of air drawn from outside the mobile platform, to create a second quantity of air;

pressurizing said cabin area with said second quantity of air;

exhausting a portion of said second quantity of air from said cabin area to a supplemental cooling system, in which the supplemental cooling system is primarily responsible for cooling a portion of said mobile platform other than said cabin area;

using the supplemental cooling system to cool said portion of said second quantity of air to create a third quantity of air; and

circulating said third quantity of air back into said cabin area to mix with said second quantity of air and to assist in cooling said cabin area.